

XX. *Notes on the life-history of Porphyraspis tristis, a palm-infesting Cassida from Brazil.* By A. SIDNEY OLLIFF.

[Read September 3rd, 1884.]

THE *Cassida* which I now have the pleasure of exhibiting in all its stages was recently received by Lord Walsingham in a small collection of insects formed by Mr. John Cameron Grant in the neighbourhood of Bahia. My attention was first called to this insect by observing the curious excrementitious covering, closely resembling an inverted bird's nest in miniature, with which the larva protects itself from the heat of the sun. The species proves to be the *Porphyraspis tristis* of Boheman,\* and is found not uncommonly feeding gregariously on the tender portions of the leaves of the cocoa-nut palm, to which it is said to do considerable damage. The larva of this insect was brought before the notice of the Society at a recent meeting by Dr. David Sharp, who does not, however, appear to have recognised the merdigerous nature of its covering.† The larvæ of many of the *Cassididæ*, as well as certain species of *Crioceridæ*, are well known to form for themselves a covering of their excrement; but I am not aware that any account has been published of a coleopterous larva making a nest-like habitation for itself, with the exception of *Porphyraspis palmarum*, Boheman, figured and described by Candèze in his excellent paper on the Metamorphoses of Exotic Coleoptera.‡ This larva forms a nest, which it carries on its back, very similar in appearance to that of *P. tristis*, and is found on a palm, supposed to be a species of *Thrinax*, in the island of San Domingo.

I am inclined to think that this nest-forming habit

\* 'Monographia Cassididarum,' i., p. 95 (1850); Wagener, MT. Münch. Ent. Ver., v., p. 53 (1881).

† Cf. *infra*, Proc. Ent. Soc. Lond., 1884, p. xviii; 'Zoologist' (3) viii., p. 391 (1884).

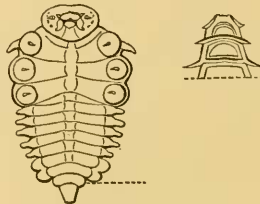
‡ Mém. Soc. Liège, xvi., p. 390, pl. v., fig. 5 (1861).

will prove to be common to all the larvæ of the genus *Porphyraspis*, as I have in my possession nests very like those of the two above-mentioned species, which were received from Brazil in a dried condition with numerous specimens of *P. rugosus*, Boheman.

The covering of the larva of *P. tristis* is composed of a number of filaments greatly resembling vegetable fibres; it is broadly oval in form, varying from 4—9 mm. in breadth according to the size of the larva, and is of a dirty reddish brown colour. This structure is carried on the back of the insect, and is supported by a forked anal appendage such as is found in the larvæ of the genus *Dolichotoma* and other *Cassididæ*. Candèze failed to detect an appendage of this kind in the larva of *P. palmarum*, but says that in that species the filaments composing its covering are firmly attached to the upper surface of the 8th abdominal segment.

The following is a brief description of the larva of *Porphyraspis tristis*:—

Ovate, strongly convex above, flattened below, considerably broader in front than behind, pale yellowish white. Head vertical, moderately large, rather longer than broad when viewed from above, slightly emarginate in front, furnished with a few long bristly hairs near the anterior angles, the median line strongly impressed. Antennæ very short, 3-jointed; the two basal joints transverse, the apical much narrower, and provided with two or three bristly hairs. Ocelli six on each side; four near the base of the antenna, forming an oblique series, and two just behind these a little nearer the lateral margin. Labrum rather large, transverse, bilobed. Mandibles rather short and robust, obtusely bifid at the



LARVA OF PORPHYRASPIS TRISTIS.

apex. Thoracic segments broad, clothed with minute hairs near the sides. Abdominal segments much narrower than those of the thorax, all of about equal length, but gradually decreasing in breadth towards the apex; segments 1—5 with a moderately large

fleshy protuberance on each side; these protuberances are narrowed towards the apex, and are furnished with a few short bristly hairs; the 6th and 7th segments with the protuberances much larger and rounded externally; the anal segment is provided on its upper surface with a forked appendage, which is bent forwards in the direction of the head; the sides of this appendage are chitinous, and are held together by narrow membranous cross-pieces; by its combined strength and lightness it seems admirably adapted for carrying the heavy covering of excrement. Stigmata eight on each side, arranged as in the European *Cassididæ*. Legs short and robust, provided with a few rather long bristly hairs; claws simple, strongly curved. Length of adult,  $4\frac{1}{2}$  mm.

Compared with the larva of *Porphyraspis palmarum*, as figured by Candèze, this species is much broader behind. It also differs in having the head larger and the protuberances on the 6th and 7th abdominal segments rounded externally instead of tapering to a point.